

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A device, connected to and interfacing with a subscriber network within a subscriber location, said device [[for]] enabling network connectivity of said subscriber with a network service provider, the device comprising:

a wireless transceiver;

an antenna coupled to the wireless transceiver; and

a switch interfacing with said subscriber network, said switch being coupled to the wireless transceiver and to a wireline network, the switch exchanging data between said interfaced subscriber network and [[with]] the network service provider over the wireline network during normal operation and also exchanging data with the network service provider via the wireless transceiver when connectivity is lost on the wireline network;

wherein the wireless transceiver is configured to relay data from another wireless transceiver interfacing with another subscriber network that has lost said connectivity to the wireline network due to a problem in a residence or place of business of a network subscriber associated with said another ~~wireless transceiver~~ subscriber network, said another wireless transceiver being connected to said wireless transceiver through no more than one other wireless transceiver interfacing with one other subscriber network that has also lost said connectivity to the wireline network when said data is being relayed, said

another and said one other wireless transceivers having been wireline-connected to the wireline network during normal operation.

2. (canceled)

3. (previously presented) The device of claim 1, wherein the wireless transceiver relays the data from the other wireless transceivers that have lost connectivity by forwarding data units received from the other wireless transceivers through the switch and to the wireline network.

4. (canceled)

5. (original) The device of claim 1, wherein the device is physically located at a location of a subscriber of the network service provider.

6. (original) The device of claim 1, wherein the wireless transceiver operates in accordance with IEEE 802.11 standards.

7. (original) The device of claim 1, wherein the wireline network includes a fiber network.

8. (original) The device of claim 1, wherein the wireline network includes coaxial cables.

9. (original) The device of claim 1, wherein the switch monitors a failed connection state of the wireline network for renewed connectivity of the wireline network and resumes communication over the wireline network when the wireline connection is renewed.

10. (currently amended) A method performed by a network subscriber comprising:
establishing wireline-connectivity to a network service provider over a wireline connection as normal connectivity to a first subscriber network on premises of said network subscriber;
monitoring the wireline connection for failure; and
when the wireline connection fails due to a problem inside said premises of said network subscriber, automatically establishing a substitute wireline connection to the network service provider over a wireless connection relayed from the network subscriber through more than one other network subscriber, one said more than one other network subscriber having separate normal wireline-connectivity to the network service provider, said automatically establishing including:

(a) providing wireless-connectivity directly between a first transceiver associated and interfacing with said first subscriber network of said network subscriber and a second transceiver associated and interfacing with a second subscriber network of a network subscriber other than said one said more than one other network subscriber, and

(b) providing wireless connectivity directly between said second transceiver and a third transceiver associated and interfacing with a third subscriber network of said one said more than one other network subscriber.

11-12. (canceled)

13. (original) The method of claim 10, wherein the wireless connection is formed in accordance with IEEE 802.11 standards.

14. (original) The method of claim 10, wherein automatically establishing a connection to the network service provider includes wirelessly broadcasting a message requesting a relay to the network service provider by the one or more other network subscribers.

15. (original) The method of claim 14, wherein automatically establishing a connection to the network service provider further includes authorizing the subscriber to use the network.

16. (original) The method of claim 14, wherein the relaying one or more other network subscribers forward data received wirelessly from the network subscriber over a second wireless connection to the network service provider.

17. (original) The method of claim 10, further comprising:
monitoring a failed connection state of the wireline connection for renewed connectivity of the wireline connection; and
disconnecting from the wireless connection when the wireline connection is renewed.

18. (currently amended) A method for providing fallback network connectivity to a network service provider for one of a plurality of ~~network nodes~~ subscriber networks, each subscriber network at a different subscriber location, said method comprising:

providing wireline-connectivity as primary network connectivity to said service provider for each of said ~~network nodes~~ subscriber networks; and

providing backup network connectivity to said one [[node]] subscriber network for a network subscriber having a residence or place of business, said backup connectivity being provided when said wireline connectivity for said one node is lost due to a problem in said residence or said place of business via a wireless network by wirelessly relaying data directly from a first transceiver associated and interfacing with [[in]] said one [[node]] subscriber network to a second transceiver associated and interfacing with [[in]] another [[node]] subscriber network in the plurality of ~~network nodes~~ subscriber networks which had an active wireline connection to the network service provider, said second transceiver being wirelessly connected directly to a third transceiver associated and interfacing with [[in]] yet another [[node]] subscriber network in the plurality of ~~nodes~~ subscriber networks that has an active wireline connection to the network service provider.

19-21 (canceled)

22. (original) The method of claim 18, wherein the wireless network is formed in accordance with IEEE 802.11 wireless connectivity standards.

23. (original) The method of claim 18, wherein providing the backup network connection includes authorizing a subscriber of the network with the network service provider.
24. (original) The method of claim 18, further comprising:
providing the backup network connectivity in response to a failed connection state of the wireline connection.
25. (original) The method of claim 24, further comprising:
monitoring the failed connection state of the wireline connection for renewed connectivity of the wireline connection; and
disconnecting from the backup network connectivity when the wireline connection is renewed.
26. (original) The method of claim 18, wherein the network service provider provides Internet connectivity or telephony services.
27. (original) The method of claim 18, wherein the wireline connection includes a fiber connection or a coaxial connection leading to a subscriber of the network service provider.
28. (currently amended) A network comprising:

wireline connections to a plurality of ~~subscribers~~ subscriber locations, each location having a respective subscriber network;

a different network interface ~~units (NIUs)~~ unit (NIU) located at, and interfacing with, the respective subscriber network at each one of the plurality of ~~subscribers~~ subscriber locations, the ~~NIUs~~ each NIU including:

a wireless transceiver configured to wirelessly communicate with at least one other said ~~NIUs~~ NIU; and

a switch coupled to the wireless transceiver and to one of the wireline connections, the switch providing data from the one of the wireline connections to a corresponding subscriber of the subscriber network during normal operation of the one of the wireline connections and the switch providing data from the wireless transceiver to the corresponding subscriber of the subscriber network when connectivity on the one of the wireline connections fails due to a problem in a residence or place of business of said corresponding subscriber;

wherein the wireless transceiver interfacing with its respective subscriber network is configured to relay data directly from another wireless transceiver in another NIU interfacing with its respective another subscriber network to which its respective one of said wireline connections has failed, the another wireless transceiver relaying said data directly from yet another wireless transceiver in yet another NIU interfacing with its respective yet another subscriber network that is wireline-connected to the wireline network.

29. (original) The network of claim 28, wherein the NIUs form a wireless ad-hoc

network.

30. (original) The network of claim 28, wherein the NIUs each additionally include:

an antenna coupled to the wireless transceiver.

31. (original) The network of claim 28, wherein the wireless transceiver is configured to relay data from other wireless transceivers that have lost connectivity with the wireline connections.

32. (original) The network of claim 31, wherein the wireless transceiver relays the data from the other wireless transceivers that have lost connectivity by forwarding data units received from the other wireless transceivers through the switch and to the wireline network.

33. (canceled)

34. (currently amended)

A method for maintaining wireline communication comprising:

providing first wireline communication and first wireless communication between a first subscriber network of a first network subscriber and a network service provider;

providing second wireline communication and second wireless communication between a second subscriber network of a second network subscriber and said network service provider; and

providing, when said first wireline communication fails due to a problem inside premises of said first network subscriber, substitute wireline communication for said first network subscriber by way of said second wireline communication by wirelessly relaying data indirectly between two nodes through a third node associated with a third network subscriber with failed wireline communication, one of said two nodes located in said first subscriber network [[or]] on said premises of said first network subscriber and the other of said two nodes located in said second subscriber network [[or]] on premises of said second network subscriber, said other of said two nodes relaying said data with said network service provider over a wireline otherwise normally carrying only said second wireline communication, said one node having a first transceiver interfacing with said first subscriber network, said other node having a second transceiver interfacing with said second subscriber network and said third node having a third transceiver interfacing with its respective third subscriber network, wherein said wirelessly relaying data includes said first transceiver wirelessly communicating directly with said third transceiver and said third transceiver wirelessly communicating directly with said second transceiver.

35. (canceled)

36. (previously presented) The network of claim 28 wherein:

said wireline connections are all connected to network control;

said wireless transceiver broadcasts a connect message to be received by at least a subset of said plurality of subscribers;

one subscriber in said subset is first in said subset to relay said received message to said network control via a wireline connection; and

said network control picks a transceiver included in an NIU of said one subscriber as said yet another wireless transceiver.

37. (new) A system comprising:

a first wireline connection to a first subscriber location having a first subscriber network;

a first network interface unit (NIU) at the first subscriber location, the first NIU including:

a first wireless transceiver; and

a first switch coupled to the first wireless transceiver, the first wireline connection and the first subscriber network, the first switch providing data communications between the first wireline connection and the first subscriber network during normal operation of the first wireline connection and the first switch providing data communications between the first wireless transceiver and the first subscriber network when connectivity on the first wireline connections fails;

a second wireline connection to a second subscriber location having a second subscriber network, wherein the second subscriber location is remote from the first subscriber location; and

a second NIU at the second subscriber location, the second NIU including:

a second wireless transceiver; and

a second switch coupled to the second wireless transceiver, the second wireline connection and the second subscriber network, the second switch providing data communications between the second wireline connection and the second subscriber network during normal operation of the second wireline connection and the second switch providing data communications between the second wireless transceiver and the second subscriber network when connectivity on the second wireline connections fails;

wherein the second wireless transceiver is configured to relay data directly between the first wireless transceiver and the second wireline connection when the first wireline connection has failed.

38. (new) The system of claim 37, wherein relaying said data over the second wireline connection includes:

receiving a connect message from the first NIU at the second NIU;

encapsulating the connect message within a message addressed from the second NIU and transmitting the encapsulated connect message over the second wireline connection to a network control;

receiving an indication of authorization at the second NIU;

receiving data packets from the first wireless transceiver at the second NIU;

based on the indication of authorization, forwarding the data packets over the second wireline connection.

39. (new) The system of claim 38, wherein relaying data over the second wireline connection further includes:

determining whether the second wireline connection is operational;

performing the forwarding of data packets when the second wireline connection is determined to be operational.

40. (new) The system of claim 38, wherein relaying data over the second wireline connection further includes:

receiving a disconnect message from the first NIU at the second NIU;

ending the relaying based on the disconnect message.

41. (new) The system of claim 37, wherein the first wireless transceiver and second wireless transceiver operate in accordance with IEEE 802.11 standards.

42. (new) The system of claim 37, wherein the first wireline connection and the second wireline connection include at least one of a fiber optic cable and a coaxial cable.

43. (new) The system of claim 37, wherein the first NIU monitors a connection state of the first wireline connection, and resumes communication over the first wireline connection when the first wireline connection is restored.

44. (new) A system comprising:

a first wireline connection to a first subscriber location having a first subscriber network;

a first network interface unit (NIU) at the first subscriber location, the first NIU including:

a first wireless transceiver; and

a first switch coupled to the first wireless transceiver, the first wireline connection and the first subscriber network, the first switch providing data communications between the first wireline connection and the first subscriber network during normal operation of the first wireline connection and the first switch providing data communications between the first wireless transceiver and the first subscriber network when connectivity on the first wireline connections fails;

a second wireline connection to a second subscriber location having a second subscriber network, wherein the second subscriber location is remote from the first subscriber location;

a second NIU at the second subscriber location, the second NIU including:

a second wireless transceiver; and

a second switch coupled to the second wireless transceiver, the second wireline connection and the second subscriber network, the second switch providing data communications between the second wireline connection and the second subscriber network during normal operation of the second wireline connection and the second switch providing data communications between the second wireless transceiver and the second subscriber network when connectivity on the second wireline connections fails;

a third wireline connection to a third subscriber location having a third subscriber network, wherein the third subscriber location is remote from both the first subscriber location and the second subscriber location;

a third NIU at the third subscriber location, the third NIU including:

a third wireless transceiver; and

a third switch coupled to the third wireless transceiver, the third wireline connection and the third subscriber network, the third switch providing data communications between the third wireline connection and the third subscriber network during normal operation of the third wireline connection and the third switch providing data communications between the third wireless transceiver and the third subscriber network when connectivity on the third wireline connections fails;

wherein the second NIU is configured to relay first subscriber network data directly between the first wireless transceiver and the second wireless transceiver when the first wireline connection has failed, and wherein the third NIU is configured to relay second subscriber network data and said first subscriber network data directly between the second wireless transceiver and the third wireline connection when the second wireline connection also has failed.

45. (new) The system of claim 44, wherein relaying said data over the second wireline connection includes:

receiving a connect message from the first NIU at the second NIU;

encapsulating the connect message within a message addressed from the second NIU and transmitting the encapsulated connect message from the second wireless transceiver to the third wireless transceiver;

receiving an indication of authorization at the second NIU;

receiving data packets from the first wireless transceiver at the second NIU; and

based on the indication of authorization, forwarding the data packets between the second wireless transceiver and the third wireless transceiver; and

wherein relaying said data over the third wireline connection includes:

receiving the encapsulated connect message from the second NIU at the third NIU;

encapsulating the encapsulated connect message within a message addressed from the third NIU and transmitting the further-encapsulated connect message from the third NIU over the third wireline connection to a network control.

46. (new) The system of claim 45, wherein relaying said data between the second wireless transceiver and the third wireless transceiver further includes:

determining by the second NIU whether the second wireline connection is operational;

performing the forwarding of data packets between the second wireless transceiver and the third wireless transceiver when the second wireline connection is determined to have failed.

47. (new) The system of claim 45, wherein relaying said data between the second wireless transceiver and the third wireless transceiver further includes:

receiving a disconnect message from the first NIU at the second NIU;

ending the relaying based on the disconnect message.

48. (new) The system of claim 44, wherein the first wireless transceiver, second wireless transceiver and third wireless transceiver operate in accordance with IEEE 802.11 standards.

49. (new) The system of claim 44, wherein the first wireline connection, the second wireline connection and the third wireline connection include at least one of a fiber optic cable and a coaxial cable.

50. (new) The system of claim 44, wherein the first NIU monitors a connection state of the first wireline connection, and resumes communication over the first wireline connection when the first wireline connection is restored.

51. (new) A method comprising:

providing a first wireline connection to a first subscriber location having a first subscriber network;

providing a first network interface unit (NIU) at the first subscriber location, the first NIU including:

a first wireless transceiver; and

a first switch coupled to the first wireless transceiver, the first wireline connection and the first subscriber network, the first switch providing data communications between the first wireline connection and the first subscriber network during normal operation of the first wireline connection and the first switch providing data communications between the first wireless transceiver and the first subscriber network when connectivity on the first wireline connections fails;

providing a second wireline connection to a second subscriber location having a second subscriber network, wherein the second subscriber location is remote from the first subscriber location; and

providing a second NIU at the second subscriber location, the second NIU including:

a second wireless transceiver; and

a second switch coupled to the second wireless transceiver, the second wireline connection and the second subscriber network, the second switch providing data communications between the second wireline connection and the second subscriber network during normal operation of the second wireline connection and the second switch providing data communications between the second wireless transceiver and the second subscriber network when connectivity on the second wireline connections fails;

wherein the second wireless transceiver is configured to relay data directly between the first wireless transceiver and the second wireline connection when the first wireline connection has failed.

52. (new) A network, comprising:

a plurality of network interface units serviced by a network service provider, each one of said units interfacing with its respective subscriber network, said each one of said units including a wireless transceiver configured to wirelessly communicate with other of said units, said each one of said units being normally wireline-connected to said service provider via a switch in said unit;

wherein said switch couples said transceiver and said subscriber network to said service provider when said service provider is wireline connected to said unit and said switch couples said transceiver to said subscriber network when said service provider is not wireline connected to said unit; and

wherein a first one of said units interfacing with its respective subscriber network which is not wireline connected to said service provider is both wirelessly and wireline connected to said service provider by way of a wireless connection to a second one of said units, said second one of said units interfacing with its respective subscriber network and being wireline connected to said service provider.

53. (new) The network of claim 52 wherein said wireless connection to said second one of said units comprises an intermediate one of said plurality of network interface units which is not wireline connected to said service provider and which is wirelessly connected to both said first one of said units and said second one of said units.

54. (new) The network of claim 53 wherein data derived from, or destined for, said subscriber network associated with said first one of said units and/or data derived from, or destined for, said subscriber network associated with said intermediate one of said

units is wireline-transmitted to, or from, respectively, said service provider via said second one of said units.

55. (new) A method, comprising:

providing a plurality of network interface units serviced by a network service provider, each one of said units interfacing with its respective subscriber network, said each one of said units including a wireless transceiver configured to wirelessly communicate with other of said units, said each one of said units being normally wireline-connected to said service provider via a switch in said unit;

wherein said switch couples said transceiver and said subscriber network to said service provider when said service provider is wireline connected to said unit and said switch couples said transceiver to said subscriber network when said service provider is not wireline connected to said unit; and

wherein a first one of said units interfacing with its respective subscriber network which is not wireline connected to said service provider is both wirelessly and wireline connected to said service provider by way of a wireless connection to a second one of said units, said second one of said units interfacing with its respective subscriber network and being wireline connected to said service provider.